

CLAIMS

I claim:

1. A no break power transfer system, comprising:
a main power supply that selectively supplies electrical power to a load;
an auxiliary power unit that selectively supplies electrical power to the load;
and
a frequency adjuster between the auxiliary power unit and the load, the frequency adjuster selectively altering the frequency of power available from the auxiliary power unit to ensure that there is a frequency match between the power available from the main power supply and that which is available from the auxiliary power unit.
2. The system of claim 1, including a controller that determines a frequency of the power from the main power supply and controls the frequency adjuster to achieve a desired frequency match.
3. The system of claim 2, wherein the frequency adjuster includes a rectifier that converts an alternating current output of the auxiliary power unit to a direct current output and an inverter that converts the direct current output of the rectifier to an alternating current output having a selected frequency.
4. The system of claim 3, wherein the inverter is responsive to the controller such that the controller commands the desired output from the inverter.

5. The system of claim 1, wherein the frequency adjuster is operative to alter the frequency of power available from the auxiliary power unit during a switch from the main power supply to the auxiliary power unit.

6. The system of claim 1, wherein the frequency adjuster is operative to alter the frequency of power available from the auxiliary power unit during a switch from the auxiliary power unit to the main power supply.

7. The system of claim 1, including a switch arrangement that selectively couples the main power supply and the auxiliary power unit to the load and wherein the switching arrangement couples both power supplies to the load only when there is a suitable frequency match between the output of the frequency adjuster and the main power supply.

8. The system of claim 1, wherein the load comprises a variable frequency alternating current electrical bus network.

9. A method of completing a no break power transfer between a main power supply and an auxiliary power unit to provide electrical power to a load, comprising the steps of:

determining a frequency of output power available from the main power supply;

determining a frequency of the output power available from the auxiliary power unit; and

altering the frequency of the power from the auxiliary power unit between the auxiliary power unit and the load when the main power supply frequency and the auxiliary power unit frequency output do not match.

10. The method of claim 9, including rectifying an output from the auxiliary power unit to thereby provide a direct current output and inverting the direct current output to thereby provide an alternating current output having a selected frequency.

11. The method of claim 9, including making a switch from the main power supply to the auxiliary power unit.

12. The method of claim 9, including making a switch from the auxiliary power unit to the main power supply.